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10/574,638	03/31/2006	Italo Carfagnini	58009-021400	1734

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GREENBERG TRAURIG LLP (LA)
2450 COLORADO AVENUE, SUITE 400E
INTELLECTUAL PROPERTY DEPARTMENT
SANTA MONICA, CA 90404

EXAMINER

KRYLOVA, IRINA

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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08/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,638	Applicant(s) CARFAGNINI, ITALO	
	Examiner Irina Krylova	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 6-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 6-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 05/06/09 has been fully considered.
2. Cancellation of claims 1, 5 and addition of claims 15-18 is acknowledged.
3. An objection to claim 1 is withdrawn in light of the cancellation of claim 1 in the amendment filed by the Applicant on 05/06/09.
4. Rejections of original claims 1-14 under 35 U.S.C. 112, second paragraph, have been withdrawn in light of cancellation of claim 1 and the amendment filed by Applicant on 05/06/09.
5. The rejection of claims 1-14 under 35 U.S.C 103 as being unpatentable over Carfagnini (US 4,835,204) in view of Credali et al (WO 2004/026957) and Yamanaka (US 2003/0013820) is withdrawn in light of an amendment filed by the Applicant on 05/06/09.
6. The new grounds of rejection of newly added claim 15 and claims dependent on claim 15, are set forth below. Thus, the following action is properly made final.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2-7, 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-7, 16 and 17 are dependent on a cancelled claim 1.

Claim 15 claims a method for producing a plasto-elastomeric composition, wherein the step of addition of fillers is conducted until the composition shoes a "predetermined hardness". The term "predetermined hardness" is not clear.

8. Claims 15 and all claims dependent on claim 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

9. Claim 15 claims a method for producing a plasto-elastomeric composition comprising the steps of: providing a plasto-elastomeric composition..., **adding a filler directly in the compounding step with cross-linking or subsequently to the material that is already cross-linked, until the composition shows a total specific gravity of 2 kg/dm³ and has a predetermined hardness**". The instant specification

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does not have a support for this limitation. The instant specification recites mainly plasto-elastomeric compositions comprising partially or fully cross-linked elastomer and a specific filler. There is no place where specific steps for the process of making the composition, including adding a filler directly in the compounding step with cross-linking or subsequently to the material that is already cross-linked, until the composition shows a total specific gravity of 2 kg/dm³ and has a predetermined hardness", are recited.

The only mentioning of the total gravity is given on p.7, lines 25-27, wherein it is recited that "fillers of mineral origin are added to the basic composition to reach the total specific gravity of around 2 kg/dm³".

10. For the purpose of prosecution, it is assumed that claims 16 and 17 are dependent on a newly added claim 15. Claims 2-4 and 6 cannot be dependent on claim 15 because these claims refer to specific olefinic monomers of polyolefins and EPDM, which are not recited in claim 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Carfagnini** (EP 230,212) in view of **Credali** (WO 2004/026957) and **Yamanaka** (US 2003/0013820).

12. Carfagnini discloses a process for producing a plastomer-elastomer compositions from polyolefins and EPDM and plastomer-elastomer compositions obtained with such process (as to newly added claims 15, 17, cited in title).

13. The process for producing a plastomer-elastomer compositions comprises:

1) mastification of the EPDM elastomer and fusion of the polyolefin plastomer;

2) thorough dispersion of the components;

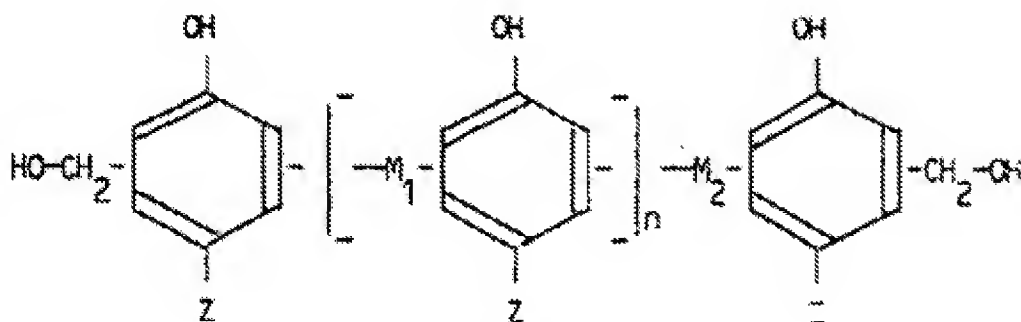
3) cross-linking of the elastomeric component;

4) even dispersion of any other additives (p. 3, lines 54-58),

wherein the elastomer is partially or fully cross-linked (Abstract), and the cross-linking agent consist of

a) 0.5-15 pbw per 100 pbw of EPDM of non-halogenated phenolic resin having the following structure:

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And M1 and M2 are radicals -CH₂- or -CH₂-CO-CH₂- ,

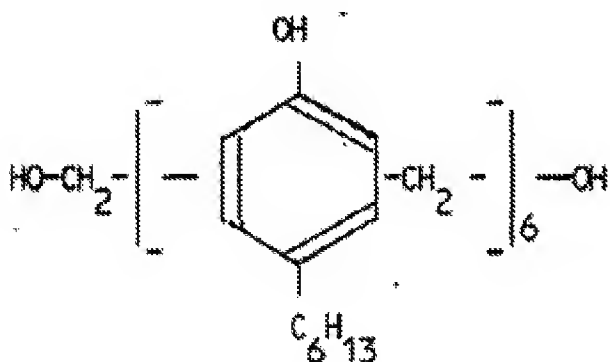
Z is an alkylenic, aryl or alkyl radical 4-16 carbon atoms;

N is integer of 0-6 (p. 3, lines 1-15); and

b) salicylic acid, admixed at a rate of 0.1-0.8 parts per 1 part of resin, by weight (p. 3, lines 45-46).

The additives added in step 4) comprise carbonate and inorganic pigments (p. 4, lines 18-25).

14. As to newly added claim 16, the phenolic resin is a phenol-formaldehyde resol resin having the following formula;



15. Carfagnini fails to specify the amount of added filler and adding the filler until the composition shows a total specific gravity of 2 kg/dm³.

16. Credali et al discloses a composition comprises:

- 1) 8-25% by weight of propylene polymer or copolymer;
- 2) 75-92% by weight of elastomeric fraction comprising copolymer of ethylene, propylene and conjugated or non-conjugated diene;
- 3) 40-80% by weight of inorganic filler (as to amended claims 14, 18, cited in Abstract; page 6, lines 8-12).

17. As to amended claims 8-9, 11-12, the used inorganic fillers comprise magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate (page 10, lines 7-13; page 11, lines 3-4), wherein the filler can be used in the form of coated particles (p.10, lines 33-34).

18. As to amended claims 8, 10, 13, calcium carbonate with specific gravity 2.71, aluminum hydroxide with specific gravity 2.42, barium sulfate with specific gravity 4.48 are commercially available (see "Hawley's Condensed Chemical Dictionary", 14th Edition, 2002, by John Wiley & Sons Inc.).

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19. The composition comprises self-extinguishing properties, while retaining the physical and mechanical properties, and having Shore hardness of lower than 85 (p. 11, lines 11-16).

20. Yamanaka discloses a composite material comprising: ethylene-propylene-diene (EPDM) rubber, polyolefin; and an inorganic filler (abstract). The inorganic filler comprises barium sulfate ([0022]). The filler is added in ratio of 200-500 parts by weight relative to 100 parts by weight of rubber ([0011]). The composite comprises specific gravity of 1.6-1.8 g/cc (Table 3).

21. Since

1) **Carfagnini** discloses a process for producing a plastomer-elastomer compositions comprising mastification of the EPDM elastomer and fusion of the polyolefin plastomer; thorough dispersion of the components; cross-linking of the elastomeric component with aa blend of non-halogenated phenolic resin and salicylic acid; followed by even dispersion of any other additives (p. 3, lines 54-58), but fails to specify the additives being magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate, which comprise 90% or less of the composition, and addition of the filler to the composition until the final specific gravity is 2 kg/dm³;

2) **Credali et al** discloses a composition comprising:

a) 8-25% by weight of propylene polymer or copolymer;

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- b) 75-92% by weight of elastomeric fraction comprising copolymer of ethylene, propylene and conjugated or non-conjugated diene;
- c) 40-80% by weight of inorganic filler comprising magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate, wherein the composition comprises a good flame-retardancy and good elastic properties (see p.11, lines 21-26),

3) **Yamanaka** discloses a composite material comprising: ethylene-propylene-diene (EPDM) rubber, polyolefin; and an inorganic filler, wherein the filler is added in ratio of 200-500 parts by weight relative to 100 parts by weight of rubber ([0011]) so that composite comprises specific gravity of 1.6-1.8 g/cc;

therefore,

it would have been obvious to a one of ordinary skill in the art to add magnesium hydroxide, aluminum hydroxide, calcium carbonate, or barium sulfate fillers to the composition of **Carfagnini**, so that the composition of **Carfagnini**, containing 40-80% of a filler, would comprise both good flame-retardancy and elasticity properties, similar to **Credali et al**, and the specific gravity of 1.6-1.8 g/cc as in the composition of **Yamanaka**. The specific amount of added filler will depend on the desired level of flame-ratardancy and elasticity of the final composition.

22. Since

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1) the process of **Carfagnini** in view of **Credali et al** and **Yamanaka** is identical to the process claimed in the instant invention; the ranges of the added components in the process of **Carfagnini** in view of **Credali et al** and **Yamanaka** are overlapping with the ranges of the components added in the process claimed in the instant invention; and

2) the specific flame-retardancy, hardness and elasticity of the composition depend on the specific amount of added filler and, thus on the specific gravity of the composition, such limitation as “addition of the filler until the specific gravity becomes 2 kg/dm³”, becomes a result effective variable, therefore, it would have been obvious to a one skilled in the art at the time of the invention was made, to make variations in the amount of the added filler and, thus in the level of the specific gravity of the final composition, to reach the desired combination of flame-retardancy, rigidity and elasticity. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05 II).

Response to Arguments

23. Applicant's arguments filed on 05/04/09 have been fully considered but they are not persuasive.

24. Regarding the rejection of claims 1-14 under 35 U.S.C. 103(a) over **Carfagnini** (US 4,835,204) in view of **Credali et al** (WO 2004/026957) and **Yamanaka** (US 2003/0013820), Applicant argues that plasto-elastomeric composition of Carfagnini does not have “flame-proof characteristics...while maintaining optimum elastic and thermoplastic characteristics”; and neither **Carfagnini** nor **Credali et al** nor **Yamanaka**

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teach the method comprising adding fillers directly in the compounding step with cross-linking or subsequently to the cross-linked material until the composition shows a total specific gravity of 2 kg/dm³.

25. Examiner disagrees.

1) **Carfagnini** (EP 230,212) in view of **Credali** (WO 2004/026957) and **Yamanaka** (US 2003/0013820) discloses a process for producing a plastomer-elastomer compositions comprising mastification of the EPDM elastomer and fusion of the polyolefin plastomer; thorough dispersion of the components; **cross-linking** of the elastomeric component with a blend of non-halogenated phenolic resin and salicylic acid; **followed by even dispersion of any other additives** (p. 3, lines 54-58), where the fillers may be added in amount so that the final composition comprises 40-80%wt of the fillers, and having specific gravity of 1.6-1.8 g/cc, wherein the composition comprises self-extinguishing properties, while retaining the physical and mechanical properties, and having Shore hardness of lower than 85.

2) Since

a) the ranges of the added components in the process of **Carfagnini** in view of **Credali et al** and **Yamanaka** are overlapping with the ranges of the components added in the process claimed in the instant invention; and

b) the **specific flame-retardancy, hardness and elasticity** of the composition depend on the **specific amount of added filler** and, thus on the **specific gravity** of the

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composition, such limitation as "addition of the filler until the specific gravity is 2 kg/dm³", becomes a result effective variable, therefore, it would have been obvious to a one skilled in the art at the time of the invention was made, to make variations in the amount of the added filler and, thus in the level of the specific gravity of the final composition, to reach the desired combination of flame-retardancy, rigidity and elasticity. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05 II).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina Krylova whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Irina Krylova/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796

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